

VPDES NO

7/05

METHOD OF ANALYSIS:

EPA MICROBIOLOGICAL METHODS (1978) p.124

- 1) Is an analytical balance with the sensitivity of at least 1.0 mg used for weighing amounts of 2 grams or less? [9020 B.2.b]
- 2) Is a pan balance with a sensitivity of at least 0.1 gram used for weighing amounts larger than 2 grams? [9020 B.2.b]
- 3) Is water depth in water bath incubators sufficient to immerse plates? [9222 D]
- 4) Are waterbaths kept covered? [9030 B.1]
- 5) Are plates sealed (i.e. watertight plastic bags) and anchored securely when placed in a water bath incubator? [9222 D]
- 6) Are all reagents of ACS or equivalent grade? [9020 B.3.e]
- 7) Are prepared reagents dated, labeled and initialed by the preparer? [9020 B.3.e]
- 8) Is unopened dehydrated media older than 2 years, discarded? [9020 B.3.h]
- 9) Is dehydrated media stored in tightly closed bottles in the dark at less than 30°C in an atmosphere of low humidity? [9050 A.1]
- 10) Is opened dehydrated media discarded after 6 months? (May be kept up to one year if stored in a desiccator and remains free flowing and free of lumps.) [9020 B.3.h]
- 11) Is media prepared in batches that will be used in less than 96 hours and stored at 2 to 10°C? [9222 D.1.a]
- 12) Is media heated to near boiling, then cooled to below 50°C at which time the pH is checked and adjusted to 7.4 SU with NaOH as necessary? *DOCUMENTATION REQUIRED* [9222 D.1.a]
- 13) Is the rosolic acid stock solution prepared bi-weekly, stored at 2 to 10°C and discarded if color changes to muddy brown? [9222 D.1.a]
- 14) Is rosolic acid solution used if needed, to inhibit non-fecal coliform growth? [9222 D.1.a]
- 15) Do the filter and absorbent pad meet or exceed the criteria enumerated in the Standard Methods 18th Edition? [9020 B.3.g]
- 16) If a hot air sterilizing oven is used is it of sufficient size to prevent internal crowding, and constructed to give uniform and adequate temperatures of 170°± 10°C? [9030 B.2]
- 17) Is all glassware, except when in metal containers, sterilized for at least 60 minutes at a temperature of 170°C? If it can be demonstrated with a recording thermometer that the temperatures are adequate. [9040]
- 18) Are pipets in metal containers sterilized at 170°C for a minimum of 2 hours? [9040]
- 19) If an autoclave is used, is it capable of maintaining 121°C for 15 minutes? [9050 A.3]
- 20) Are all dilution bottles equipped with either glass stoppers or screw caps equipped with liners that do not produce toxic or bacteriostatic action upon sterilization? [9030 B.13]
- 21) Is glassware clean, free from cracks and chips, and stored properly? [9020 B.3.a]

[illegible]

	Y	N
22) Do pipets have error rates that do not exceed 2.5%? [9030 B.9]		
23) Are pipets sized to deliver the required volume accurately and quickly? [9030 B.9]		
24) Is a binocular microscope or a suitable optical device with 10 - 15X magnification used for colony counting? [9030 B.5.b]		
25) Is sufficient room left in the sample container to facilitate mixing by shaking? [9060 A.3]		
26) Are dilutions selected that will give 20 to 60 fecal coliform colonies per plate? [9222 D.2.a]		
27) Are dilutions capable of showing permit excursions? [Permit]		
28) Are filtration units adequately sterilized between sample sets? [9222 B.5.b]		
29) Are filtration units free from leaks and scratches? [9020 B.2.i; 9030 B.15]		
30) Are forceps sterilized before each use by dipping in alcohol and flaming? [9222 B.1.i]		
31) Is sufficient media added to absorbent pad (1.8 mL minimum)? [9222 D.2.c]		
32) Is excess media carefully poured from the culture plate? [9222 D.2.c]		
33) Is the filter pad placed on the media in a manner which prevents bubbles from being trapped under the filter pad? [9222 B.5.b]		
34) Are three 20 to 30 mL portions of sterile buffered dilution water used to rinse the funnel assembly following sample filtration? [9222 B.5.b]		
35) Are filters incubated within 30 minutes following filtration? <i>DOCUMENTATION REQUIRED</i> [9222 B.5.d]		
36) Are samples incubated for 24 ± 2 hours at $44.5^{\circ}\text{C} \pm 0.2^{\circ}\text{C}$? <i>DOCUMENTATION REQUIRED</i> [9222 B.5.d]		
37) Are all colonies exhibiting the appropriate morphology (blue with metallic sheen) included in the plate count? Note - Pale yellow colonies may be atypical E. coli. [9222 D.2.e]		
38) Are plates with > 200 colonies of fecal coliforms and non-fecal coliforms combined reported as ">" calculated fecal coliform density? [9222 B.6.b]		
39) Is fecal coliform density calculated correctly? [9222 D.3]		
40) Are all procedures carried out in a manner that will neither inhibit desired bacterial growth nor cause contamination? [9060 A.3]		
41) Is glassware tested annually for inhibitory residues or is the detergent certified by the manufacturer to be free of inhibitory effects? [9020 B.3.a.2]		
42) Is a sterile dilution water blank run after every ten samples? [9222 B.5.b]		
43) Are all autoclaved materials identified with heat sensitive tape? [9020 B.2.i]		
44) Is each plate properly identified? [Permit]		
45) Are plates sterilized prior to disposal? [Safety]		

PROBLEMS: